COSTS AND RECRUITING EFFECTS OF ALTERNATIVE PROGRAMS OF MILITARY EDUCATIONAL BENEFITS

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PREFACE

For several years the Congress has discussed modification of military educational benefits, with the objectives of improving military recruiting and retention. Legislation has been introduced frequently since 1979; a Congressionally-mandated test of several educational benefits was conducted by the Department of Defense during 1980-81; and the Army's use of discretionary educational benefits as a recruiting incentive has been the subject of frequent Congressional review since 1982.

Both the Senate and House versions of the defense authorization bill for fiscal year 1985 (S.2327 and H.R.5167) contain provisions establishing new educational benefit packages. The Manpower and Personnel Subcommittee of the Senate Committee on Armed Services requested that the Congressional Budget Office analyze these provisions and compare the costs of the respective programs. This staff working paper responds to the Subcommittee's request. In keeping with CBO's mandate to provide objective analysis, this paper makes no recommendations.

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The defense authorization bills for fiscal year 1985 recently passed by the Senate and House contain different proposals for new programs of educational benefits for military personnel. This paper presents the Congressional Budget Office's analysis of these alternative programs in terms of both their budgetary costs and their effects on military recruiting.

SENATE AND HOUSE PLANS

Senate Proposal

The Senate-passed DoD authorization bill for 1985, S. 2723, contains two sections that would affect education and training benefits for certain veterans. One provision would repeal the December 31, 1989 termination date for the Vietnam-Era GI Bill. Under current law those eligible for benefits under the old GI Bill--which was terminated on December 31, 1976--have until December 31, 1989 to complete use of their entitlements. The Senate proposal would allow those individuals who entered the Armed Forces before January 1, 1977, and who earned entitlement to these Chapter 34 benefits to use them after 1989.

The other section would create a pilot program that would entitle a limited number of veterans to a new educational benefit. The major provisions of this Citizen-Soldier Educational Assistance pilot project would:

- Provide up to $18,000 in educational assistance for high school graduates who enlist and satisfactorily complete two-year terms of service in designated military specialties;
- Require a $250 a month reduction in basic pay for participants for the full two-year term;
- Deny entitlement to other educational assistance;
- Not allow payments for basic allowances for off-base quarters or subsistence paid during the two-year term of service (though on-base quarters and subsistence in kind would be provided); and
- Offer the right to reenlist at the end of the two-year term and receive a lump sum of $6,000 at reenlistment, in return for forfeiting the entitlement to educational assistance under this program.

House Proposal

The House-passed version of the 1985 DoD authorization bill, H.R. 5167, would establish a new, comprehensive educational assistance program for both active duty and reserve forces. The House bill would replace the Veterans Educational Assistance Program (VEAP) that is currently available to active duty members and would substantially revise and expand the tuition assistance program now available to the Selected Reserve. The December 31, 1989 termination date for using the Vietnam-Era GI Bill would not be affected by the House Bill.

The provisions of the House's educational benefits package include:

- A basic non-contributory educational benefits entitlement of $10,800--$300 a month for 36 months--for all high school graduate service members satisfactorily completing three years of service or two years of active and four years of Selected Reserve service;

- Higher recruiting benefits (called "kickers") of up to an additional $14,400--$400 a month for 36 months--for active duty personnel who enlist in hard-to-fill skills;

- Supplemental benefits of up to $10,800--$300 a month for 36 months--for active duty personnel who serve in hard-to-fill skills for an additional five years beyond the amount of service required to earn the basic entitlement;

- Supplemental "kickers" of up to an additional $10,800--$300 a month for 36 months--that could be added to the supplemental benefit for personnel who serve in skills that are in critically short supply;

- A provision permitting members who have completed 10 years of active service in hard-to-fill skills, or who have retired from active duty after having served 20 or more years in such skills, to transfer use of any earned educational entitlement to their dependents;

- A provision allowing active duty personnel who have completed two years of service to use their educational entitlement to pursue in-service, part-time training, with reimbursement being made on a "tuition-and-fees" basis; and

- Entitlement to an educational benefit of up to $5,040--$140 a month for 36 months--for members who enlist or extend their enlistments for six years in the Selected Reserve.

Other provisions in the bill specify that:

- Eligibility for kickers, supplementals, and transferability to dependents would be based on shortages of personnel in critical skills and would be offered at the discretion of the Secretary of Defense;

- Qualifying service for the basic benefit, recruit "kicker," and the reserve entitlement would begin on October 1, 1984. Qualifying service for the other provisions would begin on October 1, 1985; and

- No enrollment in VEAP or the Army College Fund would be permitted for service members who enter after September 30, 1984.

COST ESTIMATES

Key Assumptions

CBO's method for estimating the costs of these programs begins with a projection of the rate of training (or further higher education) by service personnel who become eligible for benefits. The House proposal essentially establishes non-contributory entitlements for service members based on their length and type of service. Inasmuch as these benefits are analogous to those under the Vietnam-Era GI Bill, CBO uses training experience under the Chapter 34 program as a basis for projecting future training.

The Senate plan, in contrast, establishes a benefit which members can earn only by forgoing $250 per month of their basic pay while in service. This large de facto contribution increases the likelihood that the only personnel who will choose to participate in the program are those who are highly likely to pursue further higher education. Thus, eventual use of benefits under the Senate plan can be expected to be considerably higher than under the old GI Bill. Accordingly, CBO's estimate of the cost of the Senate proposal assumes a much higher rate of use of benefits--80 percent of the entitlement--than the 27 percent that would be expected on the basis of historical rates of use.

Program costs also depend on the size of the population eligible for training. In the case of the House proposal, the eligible population consists of all service personnel with high-school degrees or the equivalent, adjusted for those members who separate from service before the completion of the requisite terms. This potential trainee population is estimated directly from

current characteristics of the military forces. To reflect the various benefit provisions of the House bill, CBO assumes that the Department of Defense would use its authority to offer discretionary benefits in the same way that it now offers discretionary "kickers" under the Army College Fund, the Army's existing educational benefit program.

The Senate bill, however, would limit benefits to no more than 12,500 persons per year, all of whom must be high-school graduates who enlist for two-year terms of service. Under current policies, only the Army permits two-year enlistments; thus, CBO assumes that the Senate plan would apply only to Army personnel. Following informal guidance from staff personnel in the office of the Army's Deputy Chief of Staff for Personnel, CBO assumes that no more than 4,600 personnel per year would qualify for benefits under the Senate program (well within the 12,500 ceiling specified in the Senate bill). 1/ The Army's estimate of participation reflects the assumption that benefits under the Army College Fund (ACF) would be preferred by two-year enlistees eligible for both the ACF and the Senate plan. ACF net benefits for two-year enlistees are slightly greater than those in the Senate proposal; thus, it is assumed that all of the 4,600 enrollees under the Senate plan would be ineligible for benefits under the Army College Fund (ACF) because of their test scores, choice of military occupations, or both.

CBO's estimate of the cost of extending use of Chapter 34 benefits beyond the 1989 termination date rests on past patterns of use of GI Bill benefits. Extension would permit some members to defer use rather than undertake training prior to 1990; thus, the cost estimate shows net outlay savings between 1985 and 1989 and net costs thereafter.

Cost Estimates

In Tables 1 and 2, costs are shown at the nominal benefit levels specified in the two bills. Thus costs reflect future inflation and assume no adjustments in benefits to keep pace with inflation. In addition, CBO has projected outlays under the assumption that the Congress would adjust benefits annually to keep pace with inflation, as it has done periodically for the old GI Bill. These outlay projections are also shown as addenda in Tables 1 and 2.

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1. In earlier, informal estimates, CBO assumed that the Senate plan would be chosen by the maximum 12,500 enlistees per year. This assumption was revised on the basis of informal Army guidance.

Under the Senate bill, budgetary authority and outlays would be identical. The House bill, however, stipulates accrual accounting of budgetary authority for the portions of the House package funded in the DoD budget. CBO's formal cost analysis of H.R.5167 included an estimate of budgetary authority of $106 million in 1985, $305 million in 1986, and higher amounts in later years.

Direct comparison of the House and Senate programs is complicated by the provision limiting the new Senate proposal to a four-year test program. In contrast, the House bill would create a permanent program of entitlements and discretionary benefits. In addition to the estimates of the Senate four year pilot program shown in Table 2, CBO has calculated the long-run annual costs of both programs, assuming that each were to remain in effect permanently. For the House plan, this annual long-run cost, in 1985 dollars, would be $375 million. The annual long-run cost of the Senate bill, also in 1985 dollars, would be $6 million.

ACTIVE DUTY RECRUITING EFFECTS

Key Assumptions

CBO's active-duty recruiting estimates focus on increases in numbers of "high-quality" enlistees, since these persons are the ones who are difficult to attract. High-quality enlistees are defined as high school graduates who score in the upper half on tests given at the time of enlistment.

CBO's recruiting estimates are based on the "expected value" of educational benefits to potential enlistees. These expected values equal the value of educational benefits actually used less any required contribution; values are adjusted for personal "discount" rates that reflect people's desire to receive benefits earlier rather than later. CBO estimates of increased numbers of recruits are also net of any increases in separations from service caused by members' decisions to leave in order to use earned educational benefits. In the case of the House bill, recruiting increases are also net of the effects of ending the Army College Fund.

The impact of the Senate proposal is complicated by the issue of how much of their entitlements participants would expect to use. At the low rates of use characteristic of Vietnam-Era GI Bill (when persons used about 27 percent of their potential benefits), the expected value of the Senate program would actually be negative. That is, people would pay out in forgone basic pay more than they would get back in benefits. Accordingly, CBO would estimate no increases at all in recruiting. But, as noted earlier, there is reason to expect participants in the Senate program to have

considerably higher rates of use than the eligible population under the old GI Bill. If prospective recruits evaluated the Senate program in terms of higher use rates (specifically, the 80 percent rate assumed in the cost estimate), the proposal's expected value would be positive, and it would lead to some additional high-quality enlistments over and above the levels achieved under current policies and programs.

An extension of the 1989 termination date for Chapter 34 benefits would lead to some additional reenlistments by members who otherwise would separate prematurely in order to use their earned benefits before 1990. CBO previously estimated (in 1982) that 1,300 such premature separations would be averted. The effect of this additional retention on recruiting would be negligible.

Recruiting Estimates

CBO estimates that in fiscal year 1985 the House bill would lead to a net increase of 2,500, about 4 percent, in Army high-quality enlistments. If benefits were not indexed to inflation, this net recruiting impact would decline steadily to an estimated 2,200 by 1989. High-quality enlistments in the other services would rise initially by 900, but that expansion would be reduced to 700 additional high-quality enlistees per year by 1989. Thus, the net effect on military recruiting would be an additional 2,900-3,400 high-quality enlistments per year for the remainder of this decade.

The Senate bill, as stated previously, would not result in any additional high-quality enlistments unless potential recruits valued the program on the basis of high expected use of benefits. If they did, an unindexed program (over the four years of the test) would result in an average of an additional 50 high-quality recruits per year, all of whom would serve in the Army. Thus, the range of estimated recruiting effects under the Senate bill would be 0-50 recruits per year for four years, or as long as the program remained in effect.

It is important to realize that the net recruiting effects of the House and Senate bills differ from the total number of persons who would train under either program. The House bill would extend entitlements to approximately 300,000 active duty entrants per year, although its net recruiting effect would be only 1 percent of that number. The Senate proposal similarly would be used by far more trainees than the number of additional high-quality recruits. This occurs because, under either bill, it is likely that there would be some additional enlistments among high-school graduates with lower test scores. These effects are not included in CBO's estimate of net recruiting impact. More importantly, many persons who

would have entered the military even in the absence of new educational benefits, and so are not included in the estimates of additional recruits, would still take advantage of new benefits.

Cost-Effectiveness

Inasmuch as both the House and Senate proposals are designed to improve military recruiting and retention, one relevant measure of their cost-effectiveness is the cost per additional net high-quality enlistment. For both bills, this quantity is calculated by dividing the annual long-run cost (in constant 1985 dollars) by the annual net improvement in recruiting.

For the House bill, the cost per additional Army recruit is approximately $150,000, assuming that all the costs of the bill are incurred for the purpose of attracting additional Army personnel. This measure is relevant because the Army faces the largest recruiting requirements and historically has had the most difficulty in attracting sufficient numbers of high-quality recruits. If the cost is spread instead over the total increase in high-quality enlistments in all services, the cost per additional recruit is approximately $110,000.

The Senate bill would have both lower costs and less impact on recruiting. Since CBO's estimate of cost assumes a high (80 percent) use rate, it is appropriate to use this rate also in estimating the recruiting effect. In that case the cost per additional recruit would be roughly $120,000, and the entire program would apply solely to additional high-quality Army enlistments.

CBO's earlier estimate of 1,300 fewer separations as a result of extending the 1989 termination date for Chapter 34 benefits yields a cost of approximately $500,000 per additional career service member. If GI Bill benefits continue to be adjusted periodically in the future, this cost per member could rise to $1 million.

TABLE 1. HOUSE PROPOSALS (Millions of current dollars, by fiscal year)

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
INCREASED OUTLAYS DUE TO:																	
Vets Use																	
VA	0	0	0	16	66	157	211	252	286	315	345	372	394	411	407	402	396
DoD	0	0	0	2	10	21	32	41	48	60	84	103	119	130	137	142	144
In-Service																	
VA	0	0	59	60	65	73	74	74	77	77	80	81	82	82	83	83	83
DoD	0	0	8	9	11	11	12	13	13	14	14	14	15	15	16	16	16
Reserves (DoD)	2	12	21	28	35	40	41	42	44	46	48	49	50	50	51	52	52
Transfer-ability (DoD)	0	0	0	0	37	41	50	54	62	110	120	136	151	165	178	190	204
Total VA	0	0	59	76	131	230	285	326	363	392	425	453	476	493	490	485	479
Total DoD	2	12	29	39	93	113	135	150	167	230	266	302	335	360	382	400	416
Total Outlays	2	12	88	115	224	343	420	476	530	622	691	755	811	853	872	885	895
DECREASES IN COSTS DUE TO:																	
Chapter 34 (VA)	0	0	-6	-3	0	0	0	0	0	0	0	0	0	0	0	0	0
Terminate Current Reserve Program (DoD)	-1	-6	-9	-11	-10	-6	-2	0	0	0	0	0	0	0	0	0	0
Terminate VEAP (DoD)	0	0	0	-7	-26	-41	-67	-84	-98	-111	-119	-125	-127	-129	-131	-133	-134

(Continued)

TABLE 1. (Continued)

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
NET EFFECTS ON COSTS																	
VA	0	0	53	73	131	230	285	326	363	392	425	453	476	493	490	485	479
DoD	1	6	20	21	57	66	66	66	69	119	147	177	208	231	251	267	282
Total Net Outlays	1	6	73	94	188	296	351	392	432	511	572	630	684	724	741	752	761
Addendum:																	
Total Net Outlays (Indexed)	1	7	81	105	231	404	529	545	742	947	1140	1358	1587	1820	2026	2240	2468

TABLE 2. SENATE PROPOSALS (Millions of current dollars, by fiscal year)

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
CITIZEN-SOLDIER PILOT PROGRAM a/																	
Training	0	0	4	14	23	30	32	26	22	18	15	14	13	9	5	2	0
VEAP Offsets	0	0	0	-1	-1	-1	-2	-2	-2	-2	-1	-1	-1	0	0	0	0
Pay Reduction	-7	-21	-28	-28	-21	-7	0	0	0	0	0	0	0	0	0	0	0
Total Outlays	-7	-21	-24	-15	1	22	30	24	20	16	14	13	12	9	5	2	0
Addendum:																	
Total Outlays (Indexed)	-7	-22	-27	-16	6	35	51	46	42	38	35	34	32	23	16	7	0
REPEAL 1989 TERMINATION DATE b/																	
Total Outlays	-1	-2	-2	-3	-2	140	135	110	99	91	84	78	70	62	53	46	40
Addendum:																	
Total Outlays (Indexed)	-2	-4	-4	-6	-5	230	243	214	207	205	204	204	197	185	171	157	144

a. All costs and offsets would be included in the DoD budget function.

b. Offsets before 1990 would be included in the VA budget function; costs in 1990 and after would be included in the DoD budget function.